



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

11 Liberty St., Utica, N. Y. Garrison, N. Y.
New York City: Grand Central Terminal

Annual Subscription, \$6.00. Single Copies, 15 Cts.

Entered as second-class matter January 21, 1922, at the Post Office at Utica, N. Y., under the Act of March 3, 1879.

VOL. LV JUNE 9, 1922 No. 1432

CONTENTS

<i>Surgical and Anatomic Evidence of Evolution:</i> DR. W. W. KEEN.....	603
<i>Cultivation and Soil Moisture:</i> DR. H. A. NOYES	610
<i>The Copper Eskimos:</i> HAROLD NOICE.....	611
<i>Scientific Events:</i>	
<i>The British Institute of Physics; The Radio Service of the University of Wisconsin; Scientific Exhibit at the Meeting of the American Medical Association; The Rome Meeting of the International Geodetic and Geophysical Union</i>	612
<i>Scientific Notes and News</i>	614
<i>University and Educational Notes</i>	617
<i>Discussion and Correspondence:</i>	
<i>The Thermel:</i> DR. WALTER P. WHITE. <i>Solar Energy:</i> The Late FRANCIS B. DANIELS. <i>Scientific Work in Russia:</i> DR. ALEŠ HRDLIČKA. <i>Doctorates in Agriculture:</i> PROFESSOR W. H. CHANDLER. <i>The Writing of Popular Science:</i> DR. WALDEMAR KÄMPFFERT, PHILIP B. McDONALD, E. T. BREWSTER	617
<i>Notes on Meteorology and Climatology:</i>	
<i>The Streamflow Experiment at Wagon Wheel Gap:</i> DR. C. LEROY MEISINGER.....	622
<i>Special Articles:</i>	
<i>An Early Stage of the Free-martin and the Parallel History of the Interstitial Cells:</i> PROFESSOR FRANK R. LILLIE and K. F. BASCOM. <i>The Effect of Acid on Ciliary Action:</i> DR. J. M. D. OLMSTED and J. W. MACARTHUR.....	624
<i>The Society of Mammalogists</i>	626

SURGICAL AND ANATOMIC EVIDENCE OF EVOLUTION¹

* * * * *

I PROPOSE in this address to approach evolution, not from the controversial side or from general arguments, but from a plain statement of a series of *facts*, many of them drawn from my personal experience as a surgeon and anatomist—facts which, to my mind, absolutely demonstrate the solidarity of animal life, more especially in the case of the vertebrates, such as fish, birds, other mammals and man, the highest mammal.

Many opponents of evolution admit the gradual development of animal life from its lowest form up to and including the anthropoid apes, but they draw the line there, basing this belief on the account in Genesis. Man, they insist, stands as a separate direct creation by the Almighty, "out of the dust of the ground." Such an argument is like declaring that the laws of mathematics reign in numbers up to, say, 100,000 or 1,000,000, but beyond that limit are no longer valid.

* * * * *

Let me now point to *facts*—not theories but facts—which demonstrate this unity of the animal kingdom, including man.

1. Let me relate some operations I have done on the human brain. The brain in animals, including man, consists in a general way of (a) the cerebrum; (b) the cerebellum; (c) the spinal cord; and (d) certain structures which bind these three together. Extend the fingers straight forward. The fingers then resemble the "convolutions" on the surface of the brain; the furrows between them resemble the "fissures" between the convolutions of the brain. The principal fissures between the convolutions are similar in man and animals.

¹ Part of the Commencement Address at Crozer Theological Seminary, Chester, Pennsylvania, on June 6, 1922.